

Packed Columns

Agilent Technologies Cross Reference



Now the Authorized Supplier
of all Packed GC Columns for
Agilent Technologies



Agilent Technologies has made a decision to exit the packed GC column business. In an effort to maintain a continuous supply of product to their customers, Agilent Technologies has named Supelco the authorized supplier of packed GC columns for Agilent Technologies and Agilent Technologies customers.

For your convenience, you may reference an Agilent Technologies part number with your first order. In most cases, your Sigma-Aldrich Supelco representative will provide you with a corresponding Supelco part number for future orders.

- All glass columns will fit Agilent/HP 5880, 5890, 5987 and 6890 GCs of configuration A, on-column injection, all detectors except ECD.
- All stainless steel columns are general configuration. You can carefully bend to fit most GCs.

| AGILENT CROSS | PACKING DESCRIPTION | TYPE | LENGTH | OD | ID | CAT. NO. | PRICE |
|---------------|---|------|--------|------|-------|----------|-------|
| 19001A-101 | 80/100 Chromosorb 101 | SS | 6 ft | 1/8" | 2.1mm | 12712 | |
| 19001A-102 | 80/100 Chromosorb 102 | SS | 6 ft | 1/8" | 2.1mm | 13794 | |
| 19001A-103 | 80/100 Chromosorb 103 | SS | 6 ft | 1/8" | 2.1mm | 13104-U | |
| 19001A-A01 | 80/100 HayeSep A | SS | 6 ft | 1/8" | 2.1mm | 13105-U | |
| 19001A-A11 | 10% OV-1 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13106-U | |
| 19001A-A52 | 5% OV-1 on 100/120 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13107-U | |
| 19001A-B11 | 10% OV-17 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13109-U | |
| 19001A-B51 | 5% OV-17 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13114-U | |
| 19001A-D11 | 10% OV-101 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13115-U | |
| 19001A-D12 | 10% OV-101 on 100/120 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13116-U | |
| 19001A-F12 | 10% OV-225 on 100/120 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13119-U | |
| 19001A-G11 | 10% Silar 5 CP on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13121-U | |
| 19001A-J11 | 10% SE-30 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13122-U | |
| 19001A-J51 | 5% SE-30 on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13124-U | |
| 19001A-K11 | 10% Silar 10 CP on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13125-U | |
| 19001A-M11 | 10% Carbowax 20M on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13126-U | |
| 19001A-M12 | 10% Carbowax 20M on 100/120 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13127-U | |
| 19001A-M51 | 5% Carbowax 20M on 80/100 Chromosorb W HP | SS | 6 ft | 1/8" | 2.1mm | 13128-U | |
| 19001A-MA1 | 45/60 Molecular Sieve 5A | SS | 6 ft | 1/8" | 2.1mm | 13130-U | |
| 19001A-MA2 | 60/80 Molecular Sieve 5A | SS | 6 ft | 1/8" | 2.1mm | 13133-U | |
| 19001A-MX1 | 45/60 Molecular Sieve 13X | SS | 6 ft | 1/8" | 2.1mm | 13134-U | |
| 19001A-MX2 | 60/80 Molecular Sieve 13X | SS | 6 ft | 1/8" | 2.1mm | 13136-U | |
| 19001A-N00 | 80/100 Porapak N | SS | 6 ft | 1/8" | 2.1mm | 13141-U | |
| 19001A-N01 | 80/100 HayeSep N | SS | 6 ft | 1/8" | 2.1mm | 13144-U | |
| 19001A-P00 | 80/100 Porapak P | SS | 6 ft | 1/8" | 2.1mm | 13146-U | |
| 19001A-Q00 | 80/100 Porapak Q | SS | 6 ft | 1/8" | 2.1mm | 12437 | |
| 19001A-Q01 | 80/100 HayeSep Q | SS | 6 ft | 1/8" | 2.1mm | 13801 | |
| 19001A-QS0 | 80/100 Porapak QS | SS | 6 ft | 1/8" | 2.1mm | 13787 | |
| 19001A-R00 | 80/100 Porapak R | SS | 6 ft | 1/8" | 2.1mm | 13156-U | |
| 19001A-S00 | 80/100 Porapak S | SS | 6 ft | 1/8" | 2.1mm | 13161-U | |
| 19001A-T00 | 80/100 Porapak T | SS | 6 ft | 1/8" | 2.1mm | 13163-U | |

Order: 1.800.325.3010 Technical Service: 1.800.359.3041 Web: www.sigma-aldrich.com/supelco

Gas Chromatography

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|---------------|---|--------|--------|-------|--------|----------|-------|
| 19001C-001 | 1.95% QF-1 + 1.5% OV-17 on 100/120 Chromosorb W H | Glass | 6 ft | 1/4" | 2mm | 13078-U | |
| 19001C-002 | 1.95% OV-210 + 1.5% OV-17 on 100/120 Chromosorb | Glass | 6 ft | 1/4" | 2mm | 13079-U | |
| 19001C-003 | 10% FFAP + 1% H3P04 on 100/120 W AW | Glass | 6 ft | 1/4" | 2mm | 13081-U | |
| 19001C-102 | 80/100 Chromosorb 102 | Glass | 6 ft | 1/4" | 2mm | 13082-U | |
| 19001C-A31 | 3% OV-1 on 80/100 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13083-U | |
| 19001C-B12 | 10% OV-17 on 100/120 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13084-U | |
| 19001C-B31 | 3% OV-17 on 80/100 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13085-U | |
| 19001C-D11 | 10% OV-101 on 80/100 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13086-U | |
| 19001C-D32 | 3% OV-101 on 100/120 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13087-U | |
| 19001C-M11 | 10% Carbowax 20M on 80/100 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13088-U | |
| 19001C-M12 | 10% Carbowax 20M on 100/120 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13089-U | |
| 19001C-M51 | 5% Carbowax 20M on 80/100 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13090-U | |
| 19001C-M52 | 5% Carbowax 20M on 100/120 Chromosorb W HP | Glass | 6 ft | 1/4" | 2mm | 13091-U | |
| 19001C-P00 | 80/100 Porapak P | Glass | 6 ft | 1/4" | 2mm | 13092-U | |
| 19001C-Q00 | 80/100 Porapak Q | Glass | 6 ft | 1/4" | 2mm | 13093-U | |
| 19001C-QS0 | 80/100 Porapak QS | Glass | 6 ft | 1/4" | 2mm | 13094-U | |
| 19006-60026 | 10% UCW-982 on 80/100 Chromosorb P AW | SS | 18 in | 1/4" | 5.3mm | 13075-U | |
| 19006-60028 | 10% UCW-982 on 80/100 Chromosorb P AW | SS | 20 in | 1/8" | 2.1mm | 13041-U | |
| 19006-80005 | 35% DC-200 (350 cstks) on 80/100 Chromosorb P AW | SS | 5 ft | 1/8" | 2.1mm | 13044-U | |
| 19006-80015 | 80/100 Porapak Q | SS | 6 ft | 1/8" | 2.1mm | 13037-U | |
| 19006-80020 | 45/60 Molecular Sieve 13X | SS | 10 ft | 1/8" | 2.1mm | 13036-U | |
| 19006-80025 | 80/100 Porapak N | SS | 10 ft | 1/8" | 2.1mm | 13052-U | |
| 19006-80030 | 45/60 Molecular Sieve 13X | SS | 3 ft | 1/8" | 2.1mm | 13047-U | |
| 19006-80035 | 20% Sebaconitrile on 80/100 Chromosorb P AW | SS | 2 ft | 1/8" | 2.1mm | 13059-U | |
| 19006-80040 | 20% Sebaconitrile on 80/100 Chromosorb P AW | SS | 30 ft | 1/8" | 2.1mm | 13043-U | |
| 19006-80045 | 45/60 Molecular Sieve 13X | SS | 4 ft | 1/8" | 2.1mm | 13061-U | |
| 19006-80051 | 20% OV-101 on 80/100 Chromosorb W HP | SS | 4 ft | 1/8" | 2.1mm | 13035-U | |
| 19006-80060* | 20% TCEP on 80/100 Chromosorb P AW | SS | 56 cm | 1/16" | 0.75mm | 12873 | |
| 19006-80070 | 35% DC-200 (350cstks) on 80/100 Chromosorb P AW | SS | 10 ft | 1/8" | 2.1mm | 13064-U | |
| 19006-80080 | 80/100 Porapak N | SS | 6 ft | 1/8" | 2.1mm | 13063-U | |
| 19006-80085 | 80/100 Porapak QS | Teflon | 6 ft | 1/8" | 2.1mm | 13071-U | |
| 19006-80095 | 20% Sebaconitrile +2% H3PO4 on 80/100 Chromosorb | SS | 30 ft | 1/8" | 2.1mm | 13066-U | |
| 19006-80100 | 12% UCW-982 on 80/100 Chromosorb P AW | SS | 2 ft | 1/8" | 2.1mm | 13049-U | |
| 19006-80105 | 25% DC-200 (350 cstks) on 80/100 Chromosorb P AW | SS | 15 ft | 1/8" | 2.1mm | 13039-U | |
| 19006-80110 | 80/100 Hayesep Q | SS | 10 ft | 1/8" | 2.1mm | 13038-U | |
| 19006-80115 | 45/60 Molecular Sieve 13X | SS | 2 ft | 1/8" | 2.1mm | 13069-U | |
| 19006-80120 | 80/100 Hayesep N | SS | 8 ft | 1/8" | 2.1mm | 13067-U | |
| 19006-80132 | 35% DC-200 (350cstks) on 80/100 Chromosorb P AW | SS | 30 ft | 1/8" | 2.1mm | 13072-U | |
| 19006-80134 | 80/100 HayeSep Q | SS | 9 ft | 1/8" | 2.1mm | 13073-U | |
| 19006-80136 | 45/60 Molecular Sieve 5A | SS | 9 ft | 1/8" | 2.1mm | 13074-U | |
| 19006-80141 | 60/80 Chromosorb P AW | SS | 3 ft | 1/8" | 2.1mm | 13068-U | |
| 19301-60570 | 3% OV-101 on 100/120 Chromosorb W HP | SS | 20 in | 1/4" | 5.3mm | 13095-U | |
| 4330-0937 | Empty | Glass | 12 ft | 1/8" | 1.8mm | 13077-U | |
| 4330-0941 | Empty | Glass | 10 ft | 1/4" | 2mm | 21683 | |
| 5080-6759 | 45/60 Molecular Sieve 5A, 50g | | | | | 20301 | |
| 5080-6761 | 60/80 Molecular Sieve 5A, 50g | | | | | 20302 | |
| 5080-6763 | 45/60 Molecular Sieve 13X, 50g | | | | | 20304 | |
| 5180-4194 | 1% SP-1000 on 60/80 Carbowax B | SS | 8 ft | 1/8" | 2.1mm | 12545-U | |
| 5181-1245 | 1% SP-1000 on 60/80 Carbowax B | SS | 6 ft | 1/8" | 2.1mm | 12489 | |
| 7157-0206 | Empty | SS | 6 ft | 1/8" | 2.1mm | 13096-U | |
| 7157-0207 | Empty | SS | 8 ft | 1/8" | 2.1mm | 13097-U | |
| 7157-0208 | Empty | SS | 10 ft | 1/8" | 2.1mm | 13098-U | |
| 7157-0209 | Empty | SS | 12 ft | 1/8" | 2.1mm | 13099-U | |
| 7157-0210 | Empty | SS | 20 ft | 1/8" | 2.1mm | 13100-U | |
| 8501-0008 | 60/80 Tenax, 10g | | | | | 11982 | |

* Column contains stainless steel screens.

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Gas Chromatography

SUPELCO

Packed Columns

Stock Packed Columns

| General Configuration | Agilent/HP | Perkin Elmer | Varian |
|---|--|---|-------------------------------------|
| You can carefully bend this column to fit most chromatographs | 5880, 5890, 5987, 6890 (Configuration A) | 8300, 8400, 8500, 8600, 8700, Auto System (not on-column injection) | 3300/3400, 3700, Vista Series (FID) |

| COLUMN DESCRIPTION | COLUMN TYPE | GENERAL CONFIG. | AGILENT/ HP | PERKIN ELMER | VARIAN | PRICE |
|--|-------------|-----------------|-------------|--------------|---------|-------|
| CARBOPACK PACKINGS | | | | | | |
| 1% SP-1000 on 60/80 Carbowax B | | | | | | |
| 6' x 2.1mm ID | SS | 12485-U | 12487 | — | 12489 | |
| 8' x 2.1mm ID | SS | 12543-U | 12548-U | 13730-U | 12545-U | |
| 2.4m x 2mm ID TightSpec | Glass | — | 23084 | — | — | |
| 2m x 2mm ID TightSpec | Glass | — | 23093 | — | — | |
| 0.1% SP-1000 on 80/100 Carbowax C | | | | | | |
| 6' x 2.1mm ID | SS | 12495-U | 12500-U | 13736-U | — | |
| 2m x 2mm ID TightSpec | Glass | — | 26003 | — | — | |
| 6' x 2mm ID | Glass | — | 26012 | 26015 | — | |
| 3% SP-1500 on 80/120 Carbowax B, 10' | SS | 12592 | 12594 | 13734-U | 12596 | |
| 0.2% Carbowax 1500 on 60/80 Carbowax C, 6' | SS | 13860-U | — | — | — | |
| 0.2% Carbowax 1500 on 80/100 Carbowax C, 6' | SS | 12501-U | 12506-U | 13738-U | — | |
| 4% Carbowax 20M/0.8% KOH on 60/80 Carbowax B | | | | | | |
| 2m x 2mm ID TightSpec | Glass | — | 26021 | 26024 | 26027-U | |
| 6' x 2mm ID | Glass | — | 26030-U | 26033-U | — | |
| 4% Carbowax 20M on 80/120 Carbowax B-DA ² | | | | | | |
| 2m x 2mm ID TightSpec | Glass | — | 23110-U | 25931-U | — | |
| 6' x 2mm ID | Glass | — | 25936 | — | 25942 | |
| GP ⁴ 5% Carbowax 20M on 60/80 Carbowax B | | | | | | |
| Guaranteed Performance for Blood Alcohol Analysis | | | | | | |
| 2m x 2mm ID TightSpec | Glass | — | 26039 | — | — | |
| 6' x 2mm ID | Glass | — | 26048 | 26051 | — | |
| 5% Carbowax 20M on 80/120 Carbowax B-AW | | | | | | |
| 2m x 2mm ID TightSpec | Glass | — | 25945 | 25947 | — | |
| 6' x 2mm ID | Glass | — | 25953 | — | — | |
| 0.8% THEED on 80/100 Carbowax C | | | | | | |
| 1m x 2mm ID TightSpec | Glass | — | 26057 | — | — | |
| 3' x 2mm ID | Glass | — | — | 26069 | — | |
| CARBON MOLECULAR SIEVE PACKINGS | | | | | | |
| 100/120 Carboxen S-II, 10' | SS | 12577 | 12581 | 13821-U | — | |
| 45/60 Carboxen-1000, 2' | SS | 12370-U | — | — | — | |
| 45/60 Carboxen-1000, 5' | SS | 12380 | 12382 | — | 12384 | |
| 60/80 Carboxen-1000, 15' | SS | 12390-U | 12392-U | 13744-U | 12394 | |
| POROUS POLYMER PACKINGS | | | | | | |
| 80/100 Chromosorb 101, 6' | SS | 12712 | 13782 | — | — | |
| 80/100 Chromosorb 102, 6' | SS | 13794 | 13796 | — | — | |
| 80/100 HayeSep Q, 6' | SS | 13801 | 13803-U | — | — | |
| 80/100 Porapak Q, 6' | SS | 12437 | 12792-U | 13785 | 12469 | |
| 80/100 Porapak QS, 6' | SS | 13787 | 13789 | — | — | |
| 60/80 Tenax TA, 6' | SS | — | 12554 | — | — | |
| DIATOMITE PACKINGS | | | | | | |
| 10% Carbowax 20M on 80/100 Chromosorb W AW, 6' | SS | 12212 | 12785-U | 13746-U | 12456 | |
| 10% Carbowax 20M on 80/100 SUPELCOPORT, 6' | SS | 12713 | 12787-U | 13748-U | 12768 | |
| 3% OV-17 on 80/100 SUPELCOPORT, 6' | SS | 12210 | — | 13750-U | — | |
| 10% SP-1000 on 80/100 SUPELCOPORT, 10' | SS | 12537-U | — | — | — | |
| 10% SP-1000 on 80/100 SUPELCOPORT, 20' | SS | 12719 | 12794-U | 13755 | — | |
| 10% SP-2100 on 80/100 SUPELCOPORT, 6' | SS | 12429 | 12801-U | — | — | |
| 10% SP-2100 on 80/100 SUPELCOPORT, 10' | SS | 13766-U | 12530-U | — | — | |
| 10% SP-2100 on 100/120 SUPELCOPORT, 6' | SS | — | — | 13769 | 12771 | |
| 10% SP-2100 on 100/120 SUPELCOPORT, 10' | SS | 12717 | 12803-U | — | — | |
| 20% SP-2100/0.1% Carbowax 1500 on 100/120 SUPELCOPORT, 10' | SS | — | 12804-U | 13773 | — | |
| 1.5% SP-2250/1.95% SP-2401 on 100/120 SUPELCOPORT | | | | | | |
| 2m x 4mm ID TightSpec | Glass | — | 23077 | — | — | |
| 6' x 4mm ID | Glass | — | 25965 | — | — | |
| 10% SP-2330 on 100/120 Chromosorb W AW, 6' | SS | — | 13776 | 13778 | — | |
| MICROPACKED COLUMNS (2M X 1/16" OD X 0.75MM ID)³ | | | | | | |
| 80/100 Carboxen-1004 | SS | 12854 | 12846 | — | — | |
| 80/100 HayeSep D | SS | 12917 | 12921-U | — | — | |
| 80/100 HayeSep Q | SS | 12875 | 12879 | — | — | |
| 80/100 Molecular Sieve 5A | SS | 12959-U | 12963-U | — | — | |

¹ All glass columns are 1/4" OD unless noted otherwise. All stainless steel columns are 1/8" OD x 2.1mm ID unless noted otherwise

² Deactivated for acidic compounds.

³ All micropacked stainless steel columns (1/16" OD) include stainless steel screens.

⁴ GP indicates packing is pre tested for a specific analysis.

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Gas Chromatography

Packed Columns

Stock Packed Columns

Specialty 1/16" and 1/8" Columns - All are general configuration columns.

C1-C5 Hydrocarbons - Our durable 23% SP-1700 on Chromosorb P AW column can withstand the punishment of sample valve or valve switching operations. It is ideal for monitoring impurities in any of the C1-C5 hydrocarbons, and can be used with some compounds.

| APPLICATION & COLUMN DESCRIPTION (CAT. NO. OF PACKING) | CAT. NO. | PRICE |
|---|----------|-------|
| 23% SP-1700 on 80/100 Chromosorb P AW ¹ , 30' x 1/8" stainless steel | 12809-U | |

Freons -5% Fluorcol on 60/80 Carbo-pack B resolves a wide range of fluorocarbons, including isomers of many compounds. Column performance is distinctly superior to that of other packings. The column is unaffected by large amounts of HF, HCl, and other re gases that may be mixed with the fluorocarbons.

| APPLICATION & COLUMN DESCRIPTION (CAT. NO. OF PACKING) | CAT. NO. | PRICE |
|--|----------|-------|
| 5% Fluorcol on 60/80 Carbo-pack B, 10' x 1/8" SP Alloy | 12425 | |

Simulated Distillation - Our 10% Petrocol A on 80/100 SUPELCOPORT column meets all criteria of American Society for Testing and Materials (ASTM) Method D3710 for simulated distillation of gasoline fractions having a final boiling point of 500°F (260°C). 3% Petrocol B on 80/100 SUPELCOPORT column meets all criteria of ASTM Method D2887 for simulated distillation of petroleum products and fractions having a final boiling point of 1000°F (538°C). 10% Petrocol C on 80/100 SUPELCOPORT column meets all criteria of ASTM Method D5307 for determining the boiling range distribution of crude petroleum through 1000°F (538°C). We construct these columns with special care to minimize baseline rise or bleed. Each lot of packing is tested to ensure proper retention, boiling point elution order, boiling point/retention time linearity, and minimal bleed. These columns will fit most GCs and we include stainless steel nuts and ferrules.

| APPLICATION & COLUMN DESCRIPTION (CAT. NO. OF PACKING) | CAT. NO. | PRICE |
|--|----------|-------|
| ASTM D3710 -10% Petrocol A on 80/100 SUPELCOPORT, 20" x 1/8" stainless steel | 12445 | |
| ASTM D2887 -3% Petrocol B on 80/100 SUPELCOPORT, 20" x 1/8" stainless steel | 12449 | |
| ASTM D5307 -10% Petrocol C on 80/100 SUPELCOPORT, 20" x 1/8" stainless steel | 12455 | |

Sulfur Compounds -40/60 Carbo-pack B-HT 100 resolves H₂S, SO₂, COS, and methyl sulfide at ppm or ppb levels. It also will separate a variety of mercaptans, sulfides, and disulfides. Chromosil 310 separates percent or trace concentrations of H₂S, SO₂, COS, and methyl mercaptan. COS elutes before S₂ which allows determinations of trace concentrations of COS in the presence of H₂S. Chromosil 330 separates ppb concentrations of light sulfur gases, C1-C3 mercaptans, and alkyl disulfides. 10% polyphenyl ether/1.5% H₃PO₄ on 40/60 Chromosorb T columns separate H₂S, SO₂, methyl and ethyl mercaptans, and dimethyl sulfide at ppm and ppb concentrations, for air pollution studies. The Teflon packing (Chromosorb T) ensures maximum inertness toward the sulfur compounds. Supelpak S separates H₂S, SO₂, COS, methanethiol, methyl sulfide, and dimethyl sulfide at low ppm concentrations. This column typically is used in analyzing kraft pulp mill, nylon plant, and petroleum refinery samples.

| APPLICATION & COLUMN DESCRIPTION (CAT. NO. OF PACKING) | CAT. NO. | PRICE |
|---|----------|-------|
| 40/60 Carbo-pack B HT ⁴ 100, 1.4m x 1/8" Teflon (FEP) (2-0272) ASTM D5303 | 11502-U | |
| Chromosil 310 ² , 8' (6' packed) x 1/8" Teflon (FEP) | 11501-U | |
| Chromosil 330 ² , 8' (6' packed) x 1/8" Teflon (FEP) | 11496 | |
| 12% polyphenyl ether/1.5% H ₃ PO ₄ on 40/60 Chromosorb T ² , 36' x 0.085" Teflon (FEP) | 11500 | |
| Supelpak S ⁵ , 30" (18" packed) x 1/8" Teflon (FEP) | 12255-U | |

Aromatics/Aliphatics -20% TCEP on 80/100 Chromosorb P AW separates aromatic hydrocarbons in the presence of aliphatic hydrocarbons. Benzene elutes between nC11 and nC12. The 22" column meets the criteria of ASTM D4815 (C1-C4 alcohols and MTBE) and gasoline.

| APPLICATION & COLUMN DESCRIPTION (CAT. NO. OF PACKING) | CAT. NO. | PRICE |
|--|----------|-------|
| 20% TCEP, 22" x 1/16" stainless steel | 12873 | |

¹ Acid-washed support.

² Packing available only in columns. Inlet temperature affects packing; 1' left unpacked at both ends.

³ U-shaped; stainless steel nuts and ferrules included (not attached).

⁴ HT - Hydrogen-treated for deactivation.

⁵ Column is shipped with stainless steel screens

HELPFUL HINTS

TightSpec metric length columns conform to within ±6mm of their stated lengths. If you are developing a new method, and you might be using several instruments, we recommend TightSpec columns.

Supelco nominal length columns conform to instrument manufacturers' length specifications, in feet or meters, to within 1.5%. We recommend using nominal length columns only when you are trying to duplicate a method on the same model of instrument as was originally used to develop the method.

RELATED INFORMATION

Fluorcol columns: Glajch, Schindel, LC-GC4: 574, 1986.

Reference not available from Supelco.

Request the following free literature by phone or fax, or see our website.

No.

T397142

T100722

T100743

T195890

Subject

C1-C5 hydrocarbons by packed column GC

sulfur gases by packed column GC

hydrocarbons by packed column GC

packed GC column applications

Packed Columns

Custom Packings / Custom Packed Columns

Ordering Custom Packings and Custom Packed Columns

If you do not find the packing or packed column that you need, we may be able to manufacture the packing or packed column that you require through our custom program. Please follow the steps below and contact either Order Processing or Technical Service.

To order a custom packing, please specify:

1. The percent coating(s) and stationary phase(s).
2. The mesh size and support.
3. Any special treatments required (AW, AW-DMDCS, DA, DB, HT).
4. The amount required (20g, 30g, 50g, 60g, or 100g).

NOTE: Custom packings using Carbo-pack B or Carbo-pack C are only available in 15g quantities. Custom packings using Carbo-pack B HT or Carbo-pack C HT are only available in 10g quantities.

To order a custom packed column, please specify:

1. If the column catalog number is known, provide it and skip step 7.
2. The column material.
3. The GC make and model.
4. The detector type.
5. The injection configuration; either on-column (see Figure A, next page) or not on-column (see Figure B, next page).
6. The column dimensions (length, OD, and ID).
7. The packing required, either by catalog number if a stock packing or by description (see above) if a custom packing.
8. Whether the column inlet is to be packed full. Not on-column configurations are typically packed full. A space of 2 1/2 inches is typically left empty with on-column configurations to make room for the syringe needle, unless a gas sampling loop is being used, then the inlet is typically packed full.
9. If the column is to be preconditioned.
10. The number of columns needed.

NOTE: We can also manufacture custom empty columns (follow steps 2-6).

Things you should know about metal columns

- We make all stainless steel columns from our premium grade stainless steel tubing.
- We normally attach brass Swagelok nuts and ferrules to packed metal columns. If you want stainless steel fittings, or if you don't want fittings attached to your column, please specify.
- If you would like stainless steel screen ends on either or both ends of a 1/8" OD metal column, please specify.
- All 1/16" OD stainless steel columns include stainless steel screens.

Things you should know about glass columns

- We include brass nuts and Supeltex M-2A front ferrules with packed glass columns (Supeltex M-4 ferrules with Dexsil phases).
- Glass columns up to 10' (3.05m) long have one-piece construction – no butt seams.
- Most 2mm ID glass columns have chamfered inlets, to prevent bent needles.
- For an inert glass frit in the exit end of a glass column (prevents column debris from plugging a chromatograph-mass spectrometer interface), please specify.

Stationary Phase and Support

Phases which have been synthesized specifically for GC use typically are purer, of narrower molecular weight range, and without trace catalysts or metal impurities. Often they offer a wider minimum/maximum temperature range. Consult our stationary phase listings to determine if a GC-grade phase is available for your application. Descriptions of most of the GC-grade phases we offer begin with the letters DC, SP, or OV.

Be sure to request a coating percentage compatible with the support. Table A indicates examples of how much phase can be added to various types of supports. Excess phase will bleed from the column as it is conditioned, and will prolong the conditioning time (to days).

Many of the supports we offer are available in multiple particle size (mesh) ranges, deactivation, etc. Carefully read our support section to understand the differences in the many types of supports.

Table B indicates the amount of various supports required to pack tubing of different dimensions. This information is useful for customers who pack their own columns.

Table A. General Guidelines for Phase Coating Percentages

| SUPPORT | PHASE COATING % |
|------------------|--------------------------|
| Carbo-pack B | 1-6% nonsilicone phase |
| Carbo-pack C | 0.1-1% nonsilicone phase |
| Carbo-pack F | 0.1-1% nonsilicone phase |
| Chromosorb G | 20% (15% gum) |
| Chromosorb P | 30% (25% gum) |
| Chromosorb T | 15% (7% gum) |
| Chromosorb W | 20% |
| Porapak Polymers | 15% (5% gum) |
| Supelco Polymers | 15% (5% gum) |
| SUPELCOPORT | 20% |
| Tenax TA | 15% (5% gum) |

Table B. Column Packing Requirements

| SUPPORT | AVERAGE WEIGHT PER FOOT (0.3m) OF TUBING | | | |
|--------------------|--|---------|--------|--------|
| | STAINLESS STEEL | | GLASS | |
| | 1/8" OD | 1/4" OD | 2mm ID | 4mm ID |
| Carbo-pack B | 0.5g | 2.8g | 0.4g | 1.5g |
| Carbo-pack C | 1.0g | 5.5g | 1.0g | 3.5g |
| Chromosil | 0.4g | 2.6g | 0.4g | 1.4g |
| Chromosorb G | 0.8g | 3.8g | 0.7g | 2.3g |
| Chromosorb P | 0.5g | 3.3g | 0.4g | 2.4g |
| Chromosorb W | 0.3g | 2.2g | 0.3g | 1.2g |
| Chromosorb 101-108 | 0.3g | 2.2g | 0.4g | 1.2g |
| Porapak Polymers | 0.4g | 3.0g | 0.5g | 1.7g |
| SUPELCOPORT | 0.3g | 2.2g | 0.3g | 1.2g |
| Tenax TA | 0.2g | 1.2g | 0.2g | 0.8g |

All weights approximate. Tubing ID, changes in support specifications, etc. affect values.

HELPFUL HINTS

Save time when reordering custom columns. We retain sales order numbers for empty custom columns, custom packings, and packed columns for 3 years. Simply give us the number for your previous custom order.

Packed Columns

Custom Packings / Custom Packed Columns

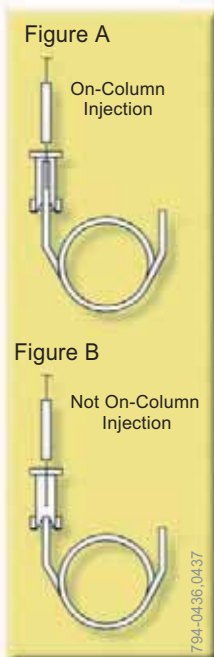
Metal and Teflon Columns

Tubing Composition and Specifications Various tubing materials have been used for GC. It is best that you use the material specified in your method. All metal tubing is specified by outside diameter, but the inside diameters of the different metals (stainless steel, copper, nickel) differ greatly. This affects the total amount of packing in the column, and a change from one metal to another can noticeably affect your separations.

Column Configuration: Most analysts prefer to have metal columns formed specifically to fit their instruments. However, you can make small modifications to the shape of a general conformation metal column, without damaging the packing, if you bend the tubing carefully (e.g., around a large gas cylinder).

Silane Treated Glass Columns

Our glass shop has been fabricating glass columns for gas chromatography for more than 30 years. We have glass column specifications for more than 500 GC models. We can manufacture glass columns for any GC that we have a drawing for.



Inlet Design: In addition to the make and model of instrument, we will need to know the injector configuration. If the column extends to the septum in the inlet, injections are made "on-column" (Figure A). If the column extends just into the fitting in the oven, injections are "not on-column" (Figure B). This information will tell us how much of the column inlet should be left unpacked. Unless requested otherwise, we prepare all columns for on-column injection, with 2½ inches (63mm) empty at the inlet, to allow for the needle entering the column. If the column is to be used with not on-column injection, you don't need to allow space for the needle, and you probably will want the column completely filled.

TightSpec versus Nominal Dimensions: Variations in column length and ID affect the reproducibility of your retention times. You can be assured of highly consistent dimensions when you use either TightSpec or Supelco nominal length columns, but there is a difference between the two. TightSpec metric length columns conform to within ±6mm of their stated lengths. This means no matter which make or model of instrument you use, your column will have the same length, and you will have the best chance of repeating your results from one instrument to another. Supelco nominal length columns conform to instrument manufacturers' length specifications, in feet or meters, to within ±1.5%. When you compare actual lengths of these columns among instruments, you will find large differences – as much as 1 foot from the stated length (thus the term nominal length). Obviously, these differences will cause problems when you try to reproduce retention times among different instruments. We recommend using nominal length columns only when you are trying to duplicate a method on the same model of instrument as was originally used to develop the method.

Special Column Designs and Considerations Consider the type of end plugs (typically glass or Teflon wool), the type of deactivation the tubing and plugs should have, and whether you want special end closures such as glass frits. The tubing and plugs should be deactivated in a manner that conforms to the characteristics of your sample. For most applications silanized wool plugs are suitable, but for analyses of acids the glass wool plugs should be treated with PO_4 , and analyses of sulfur compounds typically require Teflon wool plugs. We routinely treat glass columns with a silanizing agent, and can rinse them with other chemicals to produce special surface treatment, such as with NaOH for basic compounds.

Analysts using mass spectrometers often request glass frits in their columns, to insure that no particles get into and obstruct the jet separator. If you are using valving in your system, we can install stainless steel frits in the ends of your stainless steel column, to prevent packing particles from entering the valves and scratching their inner surfaces. We will be happy to discuss all of these options with you, and will custom manufacture your column to provide the best possible analytical environment for your samples.

Fittings: We include brass fittings and appropriate ferrules with most packed columns. You can request special fittings (stainless steel) or ferrules for your particular application. Simply tell us what you need when placing your order.

PureCol Column Inlet Liners

When nonvolatiles accumulate in the column inlet, you must replace several inches of packing – or the entire column. A silanized glass PureCol liner, inserted in the column inlet, solves this problem simply and inexpensively. When column performance begins to deteriorate, you can quickly and conveniently replace the insert – often without removing the column from the instrument. Replacement time is comparable to replacing a septum. Replace the PureCol liner when you change the septum, or when you analyze a new type of sample.

PureCol liners are available in two sizes. The smaller size fits 2mm ID glass columns with chamfered ends and 7cm of straight, unpacked inlet. The larger size fits any 4mm ID glass column that has 7cm of straight, unpacked inlet. Use PureCol liners with a (5cm) 21-gauge or finer needle.

| DESCRIPTION | QTY. | CAT. NO. | PRICE |
|---|------|----------|-------|
| FOR 2mm ID COLUMNS (CHAMFERED INLET ONLY) | | | |
| | 10 | 20534 | |
| | 50 | 20536 | |
| FOR 4mm ID COLUMNS | | | |
| | 10 | 20540-U | |
| | 50 | 20543 | |

Order your glass column with a PureCol liner already in place – at no extra cost. Just specify "glass column with PureCol liner" on your order.